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## (12) Utility Model Patent Instruction

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(54) Title of utility model: Disposable sterilised double-holed urinary drainage catheter with length indication and a balloon.

### (57) Abstract

This instrument is a disposable sterilised double-holed urinary drainage catheter with length indication and a balloon. The technical character of this instrument are volume indications in the drainage bag and length indications in the catheter, two holes in the distal end of the catheter, which connect with the catheter lumen, a water entrance in the proximal end of the catheter, which connects the balloon through a tube, and the catheter has a sheath with lubricating oil inside. The advantage of the instrument is that not only does it offer a simple structure, easy handling, low costs, and reduced labour costs, it is also sterilised.

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### **Claims**

1. It is a disposable sterilised double-holed urinary drainage catheter with length indication and a balloon, which consists of a drainage bag, a liquid tube, a tube connector and a catheter. The technical character of this instrument are volume indications in the drainage bag and length indications in the catheter, two holes in the distal end of the catheter, which connect with catheter lumen, there is a water entrance in the proximal end of catheter, which connects the balloon through a tube, and the catheter has a sheath with lubricating oil inside. The advantage of the instrument is that not only does it offer a simple structure, easy handling, low costs and reduced labour costs, it is also sterilised.
2. According to the statement in claim 1, the technical character of the catheter is a drainage tube with a lid in the end of the drainage bag and a mounting hole in the top part of the urine drainage bag.

## **Instruction (description of utility model)**

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A disposable sterilised double-holed urinary drainage catheter with length indication and a balloon

This utility model is a specialised medical instrument for urine drainage or implanted drainage purposes.

The disadvantages of the current urinary drainage instruments:

1. Up to now, several domestic hospitals use rubber tubes, glass connectors, urine drainage bottles and so on to make simple urine drainage instruments. It is difficult to make standard sterilisation because of the different forms and shapes and it can easily contain foreign substances. Sometimes, the catheter might even cause urinary tract infection. Moreover, these urinary drainage instruments are assembled by nurses. Therefore, the connectors easily get loose, which results in inconvenience for the urinary drainage operator and influences the effect of urinary drainage.
2. The current urinary drainage catheters only have one hole and no length indication to the male or female bladder. So, operators cannot ascertain the length from the catheter to the bladder. It is inconvenient to fix the catheter; male patients have to use several plasters and lines to fix the catheter, and female patients have to shave their hair first and then fix the catheter with plasters. With this fixation method, doctors and nurses have to maintain the urethral crest clean in order to avoid urinary tract infection. Reiterated usage of the catheter may cause cross infection of sexually transmitted diseases in patients. Moreover, it is also inconvenient to hang up the urine drainage bag.

The purpose of this utility model is to provide a disposable sterilised double-holed urinary drainage catheter with length indication and a balloon. This instrument does not only offer a simple structure, easy handling, low costs, reduced labour costs, it is also sterilised and disposable, which can eliminate the risk of any urinary tract infection and cross infection. The drainage bag has a volume indication showing the drained urine volume, which can help doctors and nurses to ascertain the urine output.

The achievement of the purpose of this utility model: It consists of a drainage bag, a liquid tube, a tube connector and a catheter. There are volume indications in the drainage bag and length indications in the catheter. There are two holes in the distal end of the catheter, which connects with the catheter lumen, and there is a water entrance in the end of the catheter, which connects the balloon through a tube. The catheter has a sheath with lubricating oil inside.

There is a drainage tube with a lid at the end of the drainage bag, and there is a mounting hole in the top part of the urine bag.

The utility model is sterilised and is packed in a water resistant material containing a pair of disposable gloves, a buttocks cover, a cover with a hole, cotton and a pair of tweezers. The packing bag of the instrument can be used as a water resistant sheet.

Further description of the utility model with attached figures:

Figure 1 is the illustration of the entire instrument structure.

Figure 2 is the illustration of the catheter structure.

Figure 3 is the illustration of the instrument packing.

**In figure 1:**

- 1 is the drainage tube with lid, which is located at the end of the drainage bag;
- 2 is the drainage bag, which is made of plastic or rubber;
- 3 is the volume indication on the surface of the drainage bag;
- 4 is the liquid tube connecting with the top part of the drainage bag and the connector to the catheter (6);
- 5 is the mounting hole, which is located at the top part of the drainage bag.
- 6 is the connector to the catheter, which can connect with different sizes of catheters;
- 7 is the catheter with length indication (10);
- 8 is the sheath for the catheter with lubricating oil inside, which makes the catheter easy to insert into the bladder;

**In figure 2:**

- 9 is the water entrance, which is located in the proximal end of the catheter and connects the water balloon (11) through a tube;
- 10 is the length indication in the catheter;
- 11 is the water balloon, which can be filled with 5-10 ml sterile normal saline to hold it in place; therefore, the outer part of the catheter only needs a simple fixation;
- 12 and 13 are two holes in the distal end of the catheter, which connect with the catheter lumen;

**In figure 3:**

The instrument is sterilised and packed in a water resistant material containing a pair of disposable gloves, a buttocks cover, a cover with a hole, cotton and a pair of tweezers. The packing bag can be used as a water resistant sheet.

The advantages of the utility model are:

1. It provides hospitals and clinics with a special instrument for urine drainage or implanted drainage purpose.
2. There is a length indication on the catheter, which can show the length of the catheter into the bladder.
3. The water balloon can hold the catheter in place, and this fixation is fastened to reduce the risk of urinary tract infection caused by outside fixation of the catheter.
4. There are two holes in the distal end of the catheter, which can maintain unobstructed access of the catheter and do not influence rigidity of the catheter.
5. The instrument uses a drainage bag instead of a drainage bottle, which can reduce the labour costs of assembling urine drainage instruments and eliminate the risk of urinary tract infection and cross infection caused by reiterated usage of urine drainage instruments.
6. The instrument packing contains all the materials for urinary drainage. It is easy to use.
7. The development of this instrument might accelerate the development of advanced, high quality and civilised urinary drainage instruments.

**Attached figures:**

Figure 1.

Figure 2.

Figure 3.

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## [12]实用新型专利说明书

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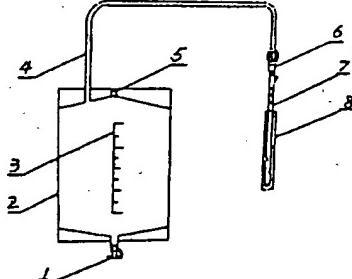
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说明书页数: 附图页数:

[54]实用新型名称 一次性无菌刻度水囊双孔导尿器

[57]摘要

一种一次性无菌刻度水囊双孔导尿器，其技术特征是在尿袋表面设置有容量指示刻度，在导尿管表面设置有长度指示刻度，在导尿管前端设置有两个导尿孔与导尿腔相通，在导尿管后端设置有水囊注水口，注水口通过导尿管内的水囊输水腔与导尿孔后部的水囊相通，在导尿管外部套有内涂润滑剂的护套。它不仅结构简单、操作方便、成本低廉、减轻了医务人员的劳动强度，而且无菌。



(BJ)第1452号

## 权 利 要 求 书

1、一种一次性无菌刻度水囊双孔导尿器，它是由尿袋、液体导管、导尿管接头及导尿管组成，其特征是在尿袋表面设置有容量指示刻度，在导尿管表面设置有长度指示刻度，在导尿管前端设置有两个导尿孔与导尿腔相通，在导尿管后端设置有水囊注水口，注水口通过导尿管内的水囊输水腔与导尿孔后部的水囊相通，在导尿管外部套有内涂润滑剂的护套。

2、根据权利要求1所述的导尿管，其特征是在尿袋下部设置有尿袋排水口和排水口塞，在尿袋上部设置有尿袋挂孔。

# 说 明 书

## 一次性无菌刻度水囊双孔导尿器

本实用新型属于一种医疗用品，特别是一种用于导尿或留置导尿的专用器具。

现有技术的不足：

1、迄今为止国内大中小医院护士多用橡胶管、玻璃接头、尿瓶等连接成各种简易的导尿装置。由于规格式样不统一，导尿管内易含杂质，所以不易做到严格灭菌，有时甚至可导致泌尿系感染，加之护士自行组装，接头易松脱等，常给操作者带来不便，影响导尿效果。

2、目前用的导尿管均为单孔，管上未指示男性或女性插入膀胱的深度刻度，使操作者操作时带有一定的盲目性。导尿管体外固定男性需用几条粘贴胶布和棉绳，女性除需用几条胶布粘贴在外阴部之外还需剃掉阴毛，操作较为烦琐。这种固定导尿管的做法尚必须注意保证尿道口清洁，否则由于龟头及包皮污垢刺激及女性经期或分泌物影响极易引起感染，尤其是多人多次反复使用还会引起性病等交叉感染。此外，尿瓶的悬吊固定亦较麻烦。

本实用新型的目的是提供一种一次性无菌刻度水囊双孔导尿器，它不仅结构简单、操作方便、成本低廉、减轻了医务人员的劳动强度，而且无菌、用毕即弃，可避免感染或交叉感染，可以从尿袋封面刻度直接读出导出尿量，从而能有效地保证膀胱导尿效果。

本实用新型的目的是这样实现的：它是由尿袋、液体导管、导尿管接头及导尿管组成，其中在尿袋表面设置有容量指示刻度，在导尿管表面设置有长度指示刻度，在导尿管前端设置有两个导尿孔

与导尿腔相通，在导尿管后端设置有水囊注水口，注水口通过导尿管内的水囊输水腔与导尿孔后部的水囊相通，在导尿管外部套有内涂润滑剂的护套。

在尿袋下部设置有尿袋排水口和排水口塞，在尿袋上部设置有尿袋挂孔。

此外，导尿器消毒灭菌后，为了防止导尿器受污染，需把导尿器密封在无菌包装袋里，在包装袋里还可以装有一性医用手套、臂巾、孔巾、清洗消毒棉球袋、镊子，其外包装可做防水单用。

以下结合附图对本实用新型作进一步说明。

图1是本实用新型的结构示意图。

图2是本实用新型导尿管的结构示意图。

图3是本实用新型包装示意图。

见图1、2，本实用新型由塑料或橡胶等材料制成的尿袋2，在尿袋2上部连接有液体导管4，液体导管4的其余一端通过导尿管接头6与导尿管7连接，导尿管接头靠其锥体粗细径不同，可连接不同规格的导尿管。为了直接观察导尿多少，在尿袋2表面设置有容量指示刻度3，为了便于悬挂和放出尿量，在尿袋2上部开有尿袋挂孔5和尿袋2下部设置有尿袋排水口和排水口塞1。为了准确掌握导尿管7插入尿道的深度，在导尿管7表面设置有长度指示刻度10。为了防止单个导尿孔的堵塞，在导尿管7前端左右两侧设置有两个导尿孔12和13与导尿腔相通。在导尿管7后端设置有水囊注水口9，水囊注水口通过导尿管内的水囊输水腔与导尿孔后部的水囊11相通，从水囊注水口注入5—10ml无菌生理盐

水至水量，使其充盈，由重力和膀胱内压力作用紧卡在膀胱颈部的尿道内口处，露在体外的导尿管只需简单固定于臀部即可。为了使导尿管外部润滑，便于插入尿道内，在导尿管外部套有内涂润滑剂的护套8。

见图3，导尿器消毒灭菌后，为了防止导尿器污染，需把导尿器密封在无菌包装袋里，在包装袋里还可以装有一性臀巾、孔巾、清洗消毒棉球袋、医用手套、镊子等，其外包装可以剪开垫于臀下做防水单用。

本实用新型的优点和积极效果是：

- 1、为临床提供一种用于膀胱导尿或留置导尿的专用器具。
- 2、导尿器上刻度可以指示插管深度，使操作者减少操作时的盲目性。
- 3、导尿管水量可卡在膀胱颈部的尿道内口处，固定牢靠，减少了目前外部固定易导致尿路感染的机会。
- 4、导尿管双孔可保持通畅且不影响导尿管应有的硬度。
- 5、尿袋替代尿瓶，导出管路密闭既可避免医护人员组装简易导尿装置之苦，又避免感染和多人多次反复使用所致的交叉感染。
- 6、导尿器包装内囊括所有导尿必备的用物，使用方便。
- 7、促使临床导尿或留置导尿的医疗手段向高级、先进、文明的方向发展。

## 说 明 书 附 图

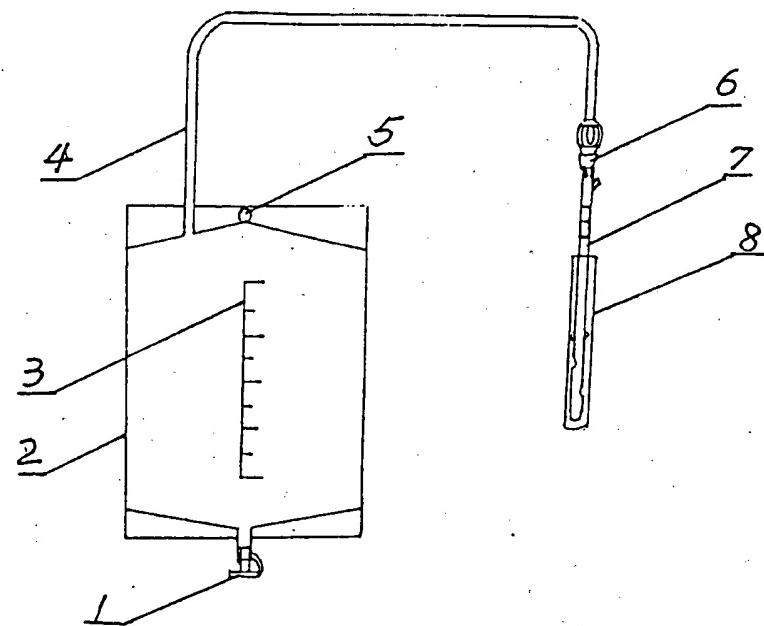


图 1

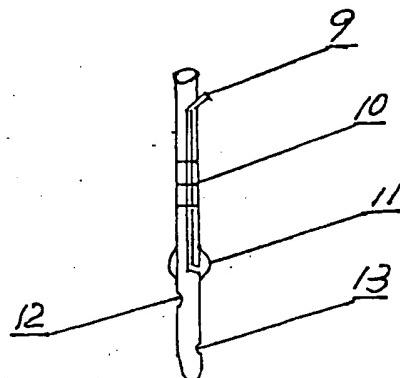


图 2

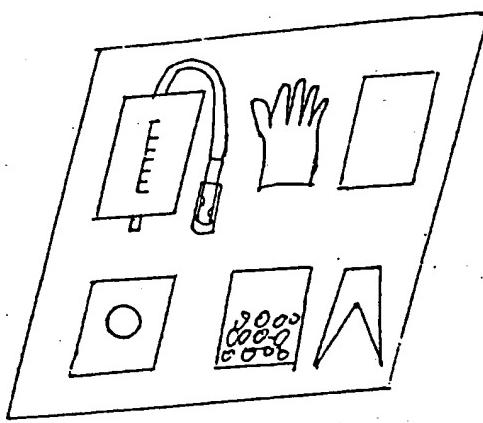


图3

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